From: "Neely, James" <James.Neely@kingcounty.gov>
To: "Fowlow, Jeffrey" <Fowlow.Jeffrey@epa.gov>
CC: "Moon, Wally" <Moon.Wally@epa.gov>
"Holmes, Anne" <Anne.Holmes@kingcounty.gov>
"Jack, Richard" <Richard.Jack@kingcounty.gov>
"Baptiste, Marisa" <Marisa.Baptiste@kingcounty.gov>
"Lester, Deborah" <Deborah.Lester@kingcounty.gov>
Date: 10/10/2018 1:46:40 PM
Subject: May Creek Site 9-25-18 Meeting Follow Up

Jeff:
I have shared the proposed site investigation outline discussed in your email dated September 25, 2008 with several of our environmental science and landfill engineering staff members (Richard Jack, Deborah Lester, Anne Holmes and Marisa Baptiste). Based on review of proposed sampling activities, you may want to consider the following:

1) Surface soil contamination was detected in the shop and Bus/RV areas during the initial 2016 site sampling activities. This area was reportedly used for vehicle maintenance/salvaging, wire stripping, and metal smelting. Some additional near surface borings/auger drillings would help to delineate the depth of observed contamination. This could be done by collecting samples in approximately four to six locations in each area at the 6-12 and 18-24 depths, for example. In the shop area where there is obvious staining, the depth of sampling may be indicated by the presence of petroleum hydrocarbons based on field observations (visual and direct reading instruments) as borings are progressed, versus limiting sampling to a specified depth.
2) Surface water sampling should be considered. There appears to be one or two ponds on the property, one of which apparently captures drainage from the landfill. Site records also indicate there is surface water drainage along the west side of the property that drains to the northwest corner and a storm water drainage pipe along the entrance driveway at the northeast corner of the property. A site inspector also noted a berm was added to the eastern edge of the property to help prevent surface water runoff from entering the adjoining property. Finally, an oily sheen has been observed on runoff along the entrance driveway. Collection of approximately six surface water samples in locations to be decided based on field observations will help define the quality of the surface water.

3) There was discussion among our technical staff regarding whether 5 groundwater monitoring wells is sufficient for an initial screening for the presence of contaminants and determining direction of groundwater flow. Increasing the number of wells to 7 would result in a higher confidence in estimating flow direction and assessing groundwater quality. In addition to the landfill, the shop area may also be a source of groundwater impact due to the types of operations that occurred here and lack of environmental controls.

   There is unfortunately no readily available hydrogeological information on the Pillon parcel area. The location falls between King County groundwater studies in the Issaquah Creek area and Renton water supply areas, along with a south King County USGS study area. There is some information that can be inferred from regional geology. All but the northeast corner of the parcel is glacial till which is rated low for groundwater contamination potential. Heading northeast there is a band of Qva (sands) with moderate groundwater contamination potential that is roughly aligned with the roadbed. Moving farther northeast is a band of outwash gravels that have high groundwater contamination potential which then merge with an organic peat layer in the May Creek bed. This lithology combined with the topography suggest that groundwater is moving in a northeasterly direction.

   The location of groundwater monitoring wells should be determined by the project hydrogeologist. As discussed above, preliminary information indicates that groundwater appears to flow in a northeasterly direction in the general vicinity of this property. Various Washington State regulations define the ‘point of compliance’ regarding migration of groundwater contaminants. Under MTCA (Washington Administrative Code 173-304-306) the point of compliance for groundwater is defined as the “uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the site”. However, for landfills that are regulated under WAC 173-304, 306, 350, and/or 351 the point of compliance is at or near the perimeter of the landfill. Groundwater monitoring wells may not be placed within areas containing refuse at solid waste units that are designated as landfills under state regulations (without a

variance issued by the Department of Ecology) due to the concern for cross contamination of leachate into the aquifer. The governing cleanup regulation(s) and associated point(s) of compliance have not yet been determined for this property.

4) Collection of landfill gas samples in the wells installed within/adjacent to the landfill portion of the property for oxygen, carbon dioxide and methane can provide information on the presence of landfill gas generation and transport.

5) Records indicating where the burning of solid waste are limited, other than a trailer bed may have been used as a burn pit. There is concern that there was burning of plastic and metals as neighbors often noted these types of odors in their complaints. Burning of plastic (PVC in particular) may leave dioxin/furan residues (in addition to SVOCs and metals). It may be useful to add dioxin/furan analysis to soil samples collected in the landfill area and in areas where ashes are noted during the exploratory excavations or soil sampling.

6) The investigation of nearby privately owned drinking water and irrigation wells and any available data on water quality will help define the hydrogeology and whether contaminants have migrated off property, or exist in background conditions. There appears to be a well in the parcel located north of the Pillon property. Sampling of this and other existing wells that appear to be downgradient of the Pillon property should be considered by the project hydrogeologist as part of the investigation. The county can assist in contacting the owner to determine if they are willing to provide access.

7) Soil samples collected in the landfill area to the bottom of the refuse material will characterize the types of materials disposed. It could be helpful to sample any liquid at the bottom of the borings as well as monitoring for landfill gas.

8) The asbestos inspectors should be present during the exploratory excavations in the landfill and collect samples of suspect asbestos containing materials that are excavated.

Thank you for this opportunity to review the initial sampling approach. We greatly appreciate EPA's support in cleaning up the surficial contamination and further assessing the presence and migration of hazardous substances at this property. Please contact me if you have any questions.

Best regards,
Jim

James Neely, PMP, CIH
Environmental Programs Managing Supervisor

King County Solid Waste Division Recycling & Environmental Services Phone: 206-477-5284
201 S. Jackson St, Suite # 701, Seattle WA 98104 • www.kingcounty.gov/solidwaste

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